

Inside Wallops

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New Pathways to Prevention through Better Medical Imaging

NASA drives innovation. Individuals with barely detectable diseases are likely to be new beneficiaries of NASA's healing edge.

Early detection can make a real difference when it comes to dealing with cancers and heart disease. That's not why Dr. James Tilton, a scientist at NASA's Goddard Space Flight Center created Hierarchical Segmentation software. He actually was developing a technology for remote sensing - a software tool for getting more detailed and accurate information from satellite images.

That changed when employees from Bartron Medical Imaging LLC (a small, minority-owned business based in New Haven, Ct.) heard about it. The company had been trying to build a product that could pick fine details out of complex medical images, improving patient diagnoses. They realized that NASA's new technology was the key. After securing the necessary licenses, Bartron successfully applied NASA's technology to medical imaging creating the Med-Seg™ unit.

A clinician sitting at a Med-Seg unit can receive a variety of medical images - CT scans, ultrasounds, dental X-rays and other imagery - and then segment the images to see features not previously visible. The clinician also can isolate specific areas of interest and compare them to reference images, looking for what is normal . . . and what is not.

This technology may allow the small signs of developing diseases to be detected sooner, reducing the costs of exploratory surgery and the suffering of full-blown disease. Detection may be even better if Bartron and NASA succeed in their effort to develop a three-dimensional version of the imaging software.

A three-dimensional imager could allow clinicians to see all sides of a tumor or lesion in great detail, clearly showing problem areas. For instance, the first buildup of plaque in heart arteries could be detected, allowing early treatment and possibly arresting the need for heart bypass surgery. Breast tumors might be seen well before they would have been detected by traditional mammograms.



NASA

Original Landsat TM image over central Washington, DC

NASA will continue to use the imaging technology to gain information from pictures taken from space like those sent from Landsat satellites. Images from Landsat and other NASA Earth observing satellites are leading to improvements in monitoring everything from agricultural crops to forest fires to urban sprawl.

Through enhanced imaging technologies, NASA is helping clinicians see developing diseases sooner, opening new pathways to prevention.

The technologies prove that the nation's modest investment in NASA is keeping all of us on the healing edge.

Yes, He's Gone



Claude Linton

Following a few date changes and scrubbed attempts, Claude Linton has retired after 47 years at Wallops, mostly out on the Island. Claude's last full day was June 3.

Claude came to Wallops in 1961 employed by the Massachusetts Institute of Technology as a technician responsible for the operation and maintenance of the Super-Schmidt camera station at Eastville, Va. This facility supported Trailblazer series rocket borne re-entry payloads launched from Wallops Island.

From 1964 to 1970, Claude was employed by the Smithsonian Astrophysical Observatory as a camera technician in much the same capacity as his position with MIT.

During the period 1970 to 1975, Claude was employed by General Electric as a launch vehicle technician in the Management and Technical Services section. In this position.

In 1976, Claude was employed by NASA Wallops Flight Center as a launch vehicle technician in the Launch Vehicle Branch. He was head of the Vehicle Assembly and Launch Section, head of the Electro Ground Support Section and headed the Non-Destruct Test System.

In 1999, Claude became the launch facilities manager and continued in this capacity until he retired.

Claude never moved very fast and wasn't known to get excited. He became somewhat of a "fixture" on Wallops Island.

When asked if he was really leaving, Claude replied, "I love the job and the people. Retiring from something you love doing isn't easy, but I realized I had more years behind me than I did before me."



NASA
A digitized
mammogram

June Events at the NASA Visitor Center

Saturday, June 14: "Light Storms"

People who live in the far north and south often see beautiful waves of colorful light dancing across the night sky. It's not magic; it's auroras. The mysteries of auroras are revealed in this 30 minute program, followed by a flipbook activity. The program begins at 1 p.m.

Saturday, June 21: "Sun-Earth Connections"

Celebrate the solstice by learning all about our sun and how it affects us on Earth. Following the presentation, each child will make their very own functional sundial. The program will begin at 1 p.m. and will last 40 minutes.

Saturday, June 28: "Weather Wise"

Weather is all around us all the time. It affects our plans, what we wear and even how we feel. Find out more about weather & what causes it in this fun children's program. After the presentation, children will make their own weather dial to take home. The program will begin at 1 p.m. and will last 40 minutes.

The Visitor Center is open Thursday through Monday from 10 a.m. to 4 p.m. Admission to Visitor Center programs is free. For further information, call x2298 or visit: <http://sites.wff.nasa.gov/vc/>

Wallops Retirement Planning Workshop

June 23 - June 25
9 a.m. to 4 p.m.
Bldg. E2 Training Room



Designed for those within five years of retirement. Registration through Saturn

Safety Training Confined Space

June 17, 2008
8 a.m. to 4 p.m.
Bldg. E-104, Rm 310

The course is offered at no cost to all NASA and contractor employees. Call Olive Finney at x2463 to register and for further information.

A Very Wet and Windy May by Bob Steiner, Meteorologist

May ended on a wet and windy note bringing our total rainfall for the month to 6.36 inches. This is 3.27 inches greater than our 3.09 inch average. Measurable rain fell on 11 days with three of these days depositing greater than 1 inch. The most rainfall in a 24 hour period was between the 8th and 9th when 1.79 inches was recorded.

Temperatures during May were slightly below normal averaging 61.8 degrees. The warmest day occurred on the 27th with a reading of 83 degrees. A 44 degree reading on May 11 and 29 were the coolest temperatures of the month. No record temperatures were set or tied.

Winds exceeded 30 mph on 14 days during May 2008. The strongest gust of 67 mph was recorded at 10 p.m. on May 11.



Hurricane Dean, August 2007

The 2008 hurricane season, which began on June 1 got off on a roll. The first tropical storm of the season, Arthur, formed at 1 p.m., May 31 near the coast of Belize and rapidly moved west and over land.

July brings warmer, more humid conditions to the Wallops area. Daily highs average between 82 and 87 in July with overnight lows ranging between 66 and 70 degrees.

The hottest day in July was the 101 degree reading on the July 10, 1993. The coolest morning temperature is 51 degrees recorded on July 2, 1965.

On average, July is the second wettest month of the year. We can anticipate having 10 day with measurable precipitation during the month giving us an average of 3.74 inches of rain.

"Hurricane season" is definitely here. It's never too early to begin preparing. We've been lucky for a number of years. Make sure you have supplies and a plan if a hurricane should strike the Delmarva Peninsula.

Sympathy is extended to the family, friends and co-workers of
Roger Chandler
who died on June 5.

Chandler worked in Building F-10 and was employed as an electronics technician by Northrup-Grumman on the NASA Sounding Rocket Operations Contract.

His wife, Pat, is the personnel officer for VT Griffin.

Wallops Shorts.....

A NASA scientific balloon was successfully launched from Ft. Sumner, N.M., on May 31. This was a flight qualification test of the new A34.43-3 balloon design with a fully loaded payload; 8,000 pound suspended weight. Part of the payload was a piggyback instrument, BalloonSat, being flown for New Mexico State University, is part of a U.S. Air Force program.

Debbie Fairbrother, NASA Wallops Flight Facility, was the experimenter.

Float altitude was 118,500 feet. The 30 hour flight was an operations and science success. The balloon performance was excellent. The NMSU science group has reported excellent data collection and instrument performance for the BalloonSat. The payload was recovered.

Inside Wallops is an official publication of Goddard Space Flight Center and is published by the Public Affairs Office, x1584, in the interest of Wallops employees. Recent and past issues of *Inside Wallops* also may be found at: <http://www.nasa.gov/centers/wallops/news/newsletters.html>

Editor
Asst. Editor

Betty Flowers
Rebecca Powell